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Original Article

Algorithmic Smile Ideals: How Short-Video Dentistry Shapes Expectations, Appearance Anxiety, and Consent Among Young Adults

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ABSTRACT

Background: Short-video platforms increasingly present cosmetic dentistry through highly visual transformations that combine clinical information, advertising, testimonials, and appearance ideals. Although social-media exposure has been associated with dental aesthetic perceptions and interest in cosmetic procedures, less is known about how young adults interpret such content and incorporate it into appearance evaluation, consultations, and treatment decisions. Objective: To explore how short-video dental content shapes young adults' perceptions of ideal smiles, appearance-related comparison and self-surveillance, use of visual references during dental consultations, and deliberation about cosmetic dental treatment and informed consent. Methods: An interpretivist qualitative study was conducted in Medan, North Sumatra, Indonesia, from February to May 2026. Twelve purposively sampled adults aged 18–29 years who regularly used TikTok, Instagram Reels, or YouTube Shorts and had undergone, sought, or seriously considered cosmetic dental treatment participated in semi-structured interviews lasting approximately 45–60 minutes. Data were analysed using reflexive thematic analysis. Results: Four interrelated themes were developed: the algorithmic ideal smile, from inspiration to self-surveillance, screenshot-led consultation, and consent under aesthetic momentum. Repeated exposure contributed to perceptions of whiteness, alignment, symmetry, and apparent naturalness as desirable norms. Content could reduce embarrassment and improve treatment awareness while also encouraging repeated comparison and appearance checking. Nine participants had shown or intended to show screenshots during consultations, which facilitated communication but could also become implicit benchmarks for expected change. Participants further described how accumulated emotional, visual, social, and practical investment in an anticipated outcome could make benefits more salient than uncertainty, maintenance, irreversibility, alternatives, or no treatment. Conclusion: Short-video dental content formed part of the broader relational context in which participants interpreted cosmetic expectations and treatment choices. Clinician engagement with visual references, biological limitations, conservative alternatives, and meaningful decision time may support more reflective and informed cosmetic dental decision-making. Keywords: short-video dentistry; cosmetic dentistry; ideal smile; appearance anxiety; informed consent.

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INTRODUCTION

Cosmetic dentistry is increasingly encountered within digital environments in which clinical information, advertising, personal testimonials, entertainment, and appearance-focused content coexist. Short-video platforms such as TikTok, Instagram Reels, and YouTube Shorts have intensified this convergence by presenting whitening, orthodontic aligners, composite bonding, veneers, crowns, and gingival procedures through visually condensed transformation narratives. Existing studies suggest that social media exposure is associated with perceptions of dental attractiveness, satisfaction with dental appearance, and interest in aesthetic dental procedures (1–3). However, the highly visual and algorithmically curated nature of short-video platforms may influence more than awareness of available treatments. Repeated exposure to similar transformations may also contribute to the normalization of particular smile characteristics and shape expectations regarding what constitutes an attractive, socially acceptable, or clinically attainable dental appearance.

Algorithmic recommendation systems can repeatedly expose users to content resembling material with which they have previously interacted, potentially creating individualized streams in which particular forms of cosmetic enhancement appear unusually common or normative (4). In aesthetic dentistry, these representations frequently emphasize features such as tooth whiteness, alignment, symmetry, and visual uniformity, characteristics that are also influential in judgments of dental attractiveness (5,6). Digital presentation may nevertheless simplify the biological and clinical complexity underlying such outcomes. Lighting, camera angle, image editing, facial morphology, periodontal condition, enamel characteristics, occlusion, treatment indication, maintenance requirements, and procedural limitations may be less visible than the final aesthetic result. Consequently, a digitally mediated "ideal smile" may be experienced not simply as a treatment preference but as a repeatedly reinforced reference point against which individuals evaluate their own appearance.

Social-comparison theory provides an important framework for understanding how such visual standards may acquire personal significance. Appearance-related comparison is particularly salient when comparison targets are perceived as relatable or attainable, while internalization of appearance ideals has been associated with dissatisfaction and reduced well-being (7,8). Research has further linked social media engagement with body-image concerns, appearance anxiety, and attitudes toward cosmetic procedures, although much of this evidence remains cross-sectional and therefore cannot establish causal pathways (9–11). These concerns may have distinctive implications in dentistry because smiles are repeatedly viewed in photographs, video calls, social interactions, professional encounters, and increasingly through front-facing cameras and edited digital images. At the same time, social media exposure should not be regarded as uniformly harmful. Educational and self-compassion-oriented content may challenge narrow appearance ideals, normalize variation, reduce embarrassment, and encourage more informed engagement with healthcare (12). The influence of digital dental content is therefore likely to be reciprocal and context dependent, involving interactions among prior aesthetic concerns, platform engagement, peer comparison, perceived credibility, and exposure to both promotional and educational messages.

Credibility is particularly important because short-video dental content frequently blurs boundaries between professional education, commercial promotion, influencer testimony, and personal experience. The presence of a clinician, clinic branding, or a relatable patient narrative may increase the perceived authority of content without necessarily ensuring balanced presentation of risks, alternatives, long-term maintenance, or treatment limitations (13). Young adults may therefore enter consultations with substantial prior exposure to treatment terminology, visual examples, provider reputations, pricing information, and expectations derived from online transformations. Such prior knowledge may facilitate communication, particularly when patients use screenshots or saved videos to express aesthetic preferences, but visual references may also be interpreted as templates for treatment or implicit promises of achievable outcomes. Clinicians must consequently negotiate the difference between a patient's desired visual endpoint and what is biologically appropriate, minimally invasive, and realistically achievable.

These processes are also relevant to informed consent. Contemporary approaches to consent emphasize that ethically valid decision-making requires more than disclosure of information or completion of a consent form; patients should be able to understand material risks, alternatives, uncertainty, maintenance requirements, costs, and the option of no treatment in relation to their own values and circumstances (14–16). This requirement may be particularly important in elective cosmetic dentistry, where anticipated visual and psychosocial benefits can be immediate and emotionally salient, whereas biological costs, irreversibility, retreatment, and long-term maintenance may appear comparatively remote. Decisions may also be shaped before the clinical consultation through repeated exposure to idealized outcomes, peer endorsement, promotional urgency, and accumulated investment in a desired future appearance. Understanding how patients interpret these influences is therefore necessary for examining not whether social media simply causes cosmetic treatment seeking, but how digitally mediated expectations become incorporated into aesthetic self-evaluation, consultations, and treatment decisions.

Despite growing quantitative evidence linking social media use with dental aesthetic perceptions and interest in cosmetic treatment, less is known about how young adults themselves make sense of repeated short-video dental content, how visual ideals become personally meaningful, and how online material enters conversations with clinicians. Cross-sectional measures of platform exposure, satisfaction, or treatment intention cannot fully explain the meanings participants attach to ideal smiles, the transition from inspiration to repeated self-assessment, the use of screenshots during treatment negotiation, or the ways in which prior emotional and practical investment may influence attention to treatment risks and alternatives. An interpretive qualitative approach is therefore appropriate because these phenomena involve subjective meanings, social comparison, relational influences, expectations, and experiences of decision-making that cannot be adequately understood through exposure measures alone.

Accordingly, this study explored how young adults who had undergone, sought, or seriously considered cosmetic dental treatment interpreted short-video dental content on TikTok, Instagram Reels, and YouTube Shorts. Specifically, it examined how participants described the formation of ideal-smile expectations, appearance-related comparison and self-surveillance, the use of digital visual references in consultations, and the perceived influence of these experiences on deliberation and informed consent. By examining these processes through participants' accounts rather than assuming a unidirectional media effect, the study aimed to clarify how algorithmically curated aesthetic content may interact with individual agency, peer influence, clinician communication, and relational autonomy in elective cosmetic dental decision-making.

MATERIALS AND METHODS

An interpretivist qualitative design was used to explore how young adults understood and experienced the relationship between short-video dental content, perceptions of an ideal smile, appearance-related self-evaluation, cosmetic dental consultations, and informed consent. A qualitative approach was considered appropriate because the study sought to examine subjective meanings, interpretations, relational influences, and decision-making processes rather than estimate the prevalence or magnitude of predetermined associations. The study was conducted in Medan, North Sumatra, Indonesia, between February and May 2026. The methodological approach was informed by principles of reflexive thematic analysis, which emphasize active researcher interpretation, recursive engagement with the dataset, and development of patterns of shared meaning rather than purely descriptive categorization (18–20).

Participants were young adults aged 18–29 years who regularly used TikTok, Instagram Reels, or YouTube Shorts and had requested, booked, undergone, or seriously considered a cosmetic dental procedure during the preceding 12 months. Eligible cosmetic procedures included tooth whitening, orthodontic aligners, composite bonding, veneers, crowns, and gingival contouring. Individuals seeking dental treatment primarily because of acute pain, trauma, or urgent oral disease were excluded because the study focused specifically on elective aesthetic decision-making. Purposive maximum-variation sampling was used to obtain information-rich accounts across different genders, predominant short-video platforms, types of cosmetic procedures, and stages of treatment decision-making. Twelve participants were included in the final qualitative sample. Sample adequacy was considered in relation to the specificity of the research question, diversity of participant experiences, depth of the interview material, recurrence of analytically relevant patterns, and the capacity of the dataset to identify both convergent and disconfirming accounts rather than statistical representativeness. This information-richness approach was considered more appropriate to the interpretive purpose of the study than determining sample size through statistical criteria alone (17).

Data were collected through individual semi-structured interviews lasting approximately 45–60 minutes. The interview format allowed participants to describe their experiences in their own terms while ensuring consistent exploration of the central phenomena of interest. Interviews addressed participants' recall and interpretation of short-video dental content, perceptions of content credibility, understandings of an ideal or desirable smile, appearance comparison and checking behaviours, expectations concerning cosmetic treatment, use of screenshots or saved visual material, interactions with dental professionals, responses

to professional disagreement, perceptions of treatment risks and alternatives, understanding of irreversibility and maintenance, and perceived freedom to delay or decline treatment. The questioning strategy was intended to elicit both facilitating and constraining influences on decision-making rather than assume that exposure to social media was uniformly harmful. Particular attention was therefore given to accounts that contradicted dominant patterns, including experiences in which educational content, preservation-oriented messages, clinicians, peers, or partners moderated cosmetic expectations.

Interviews were audio recorded with participant permission. The recordings and resulting textual material were checked and anonymized before analysis, and participant identifiers were used in place of personally identifying information when presenting quotations. Written informed consent was obtained before participation. Participants were informed that they could pause the interview, decline to answer individual questions, or withdraw before their data entered the analytic process. These procedures were particularly relevant because discussion of dental appearance, self-consciousness, social comparison, and treatment decisions could involve personally sensitive experiences. The principles underlying informed participation were consistent with the broader ethical requirement that consent be voluntary, comprehensible, and responsive to individual circumstances rather than treated as a purely administrative act (14–16).

The data were analysed using reflexive thematic analysis following the recursive analytic principles described by Braun and Clarke and subsequent methodological elaborations (18–20). Analysis began with repeated familiarization with the interview material to develop an overall understanding of individual accounts and the dataset as a whole. Initial coding was predominantly inductive and remained close to participants' descriptions of platform exposure, appearance expectations, self-evaluation, interpersonal influence, consultations, and treatment decision-making. Codes were subsequently compared across cases and organized into candidate patterns of shared meaning. Candidate themes were reviewed against the coded material and the broader dataset, refined for internal coherence and conceptual distinction, and progressively defined through interpretive writing. Theme development was therefore treated as an iterative process rather than a linear sequence in which codes were mechanically converted into predetermined categories.

Social comparison, appearance-ideal internalization, and relational autonomy were introduced during later interpretation as sensitizing concepts rather than as a priori coding categories. This allowed the initial analysis to remain grounded in participant accounts while providing theoretical resources for interpreting how repeated visual exposure, comparison with socially similar others, clinical interactions, peer relationships, and prior emotional investment shaped participants' accounts of cosmetic decision-making. Particular attention was paid to negative or disconfirming cases so that the analysis did not reproduce a predetermined narrative in which social media exposure was assumed to produce uniformly adverse effects. Reflexive memoing, repeated engagement with the interview material, documentation of theme-development decisions, and maintenance of an analytic audit trail were used to strengthen transparency and reflexive accountability throughout the analysis. These procedures supported credibility and confirmability by maintaining a traceable relationship between participant accounts, coding decisions, emerging themes, and the final interpretation.

Trustworthiness was approached through prolonged analytic engagement with the interview material, comparison of experiences across participants with different cosmetic interests and decision stages, attention to convergent and divergent cases, reflexive memoing, and documentation of major analytic decisions. Maximum-variation sampling supported transferability by capturing a range of experiences within the defined population, while the audit trail and explicit description of the analytic process supported dependability and confirmability. Consistent with reflexive thematic analysis, analytic quality was evaluated through depth of engagement, coherence of interpretation, transparency of theme development, and alignment between participant accounts and analytic claims rather than through statistical intercoder agreement, which is not a necessary quality criterion for this form of thematic analysis (18–20). Representative anonymized quotations were retained in the findings to demonstrate the relationship between participants' accounts and the interpretive claims developed from the dataset.

Ethical approval was granted by the Research Ethics Committee of Universitas Prima Indonesia. Participation was voluntary, written informed consent was obtained, and confidentiality was protected through anonymization of participant material. Only anonymized quotations were used in reporting the findings, and participants retained the right to pause, omit questions, or withdraw before analysis. The study procedures were designed to preserve participant autonomy while enabling detailed exploration of experiences related to appearance, social comparison, cosmetic treatment expectations, and elective dental decision-making.

RESULTS

Twelve young adults aged 18–29 years contributed accounts spanning different stages of cosmetic dental decision-making, from actively considering treatment to having completed a procedure. Participants described exposure to dental content on TikTok, Instagram Reels, and YouTube Shorts, with TikTok most commonly identified in their accounts. Cosmetic dental material was generally encountered alongside entertainment, beauty, fitness, educational

, and lifestyle content rather than as part of deliberate health-information seeking. Across the interviews, four interrelated themes were developed: (1) the algorithmic ideal smile, (2) from inspiration to self-surveillance, (3) screenshot-led consultation, and (4) consent under aesthetic momentum. These themes described a progressive but non-linear pathway through which repeated visual exposure informed aesthetic standards, encouraged comparison and self-monitoring, entered clinical consultations through saved images, and shaped how some participants approached treatment risks, alternatives, and decisions. The themes and associated subthemes are summarized in Table 1.

Table 1. Thematic Matrix of Participants' Experiences of Short-Video Cosmetic Dentistry

Theme	Subthemes	Principal Pattern	Participant Evidence
1. The Algorithmic Ideal Smile	Normalization through repetition; paradox of "natural" perfection; visual similarity as treatment expectation; compressed treatment journeys	Repeated exposure made whiteness, alignment, symmetry, and evenness appear increasingly ordinary while participants simultaneously sought results that did not appear artificial. Similar-looking online cases were sometimes interpreted as evidence that the same procedure should be appropriate for them.	P01, P03, P05, P06, P07, P08, P11
2. From Inspiration to Self-Surveillance	Reduced embarrassment and increased treatment awareness; repeated checking and comparison; relatability of peers; protective counter-content and social interruption	Short-video content sometimes increased knowledge and confidence to seek treatment, but the same exposure was associated with repeated checking, comparison, photography, and monitoring of dental appearance. Content featuring socially similar peers appeared particularly salient.	P01, P04, P06, P07, P08, P12
3. Screenshot-Led Consultation	Visual references as communication tools; individualized explanation and trust; screenshots as implicit expectations; second opinions and provider shopping	Saved images helped participants communicate preferences, but they could also create expectations regarding the magnitude or type of achievable change. Trust was greater when clinicians interpreted the reference in relation to the participant's own anatomy rather than dismissing social media content generically.	P02, P03, P06, P11
4. Consent Under Aesthetic Momentum	Pre-consultation commitment; uneven salience of risks; no treatment as an undervalued option; promotional urgency; decisional pauses as protective	Some participants entered consultations after already investing emotionally and practically in an anticipated aesthetic outcome. Immediate visual benefits could become more salient than maintenance, irreversibility, retreatment, alternatives, or no treatment, whereas deliberate pauses and staged explanations supported reflection.	P05, P11 and additional participant accounts

Participant IDs indicate accounts reported in the dataset.

The Algorithmic Ideal Smile

Participants described a relatively narrow visual standard of desirable teeth characterized by whiteness, alignment, evenness, and visible improvement, while simultaneously expressing resistance to an obviously artificial appearance. The desired endpoint therefore involved a tension between visible enhancement and apparent naturalness. Repetition appeared central to this process. Participants did not necessarily describe consciously adopting a celebrity standard; rather, frequently encountered smiles gradually became reference points against which their own teeth were assessed. P05 illustrated this normalization

by explaining, “After some time, it was no longer a special celebrity smile. It was the regular teeth, and mine were the peculiar ones.” The account suggests that perceived frequency within a personalized feed could be interpreted as social normality rather than simply repeated exposure to selected content.

Naturalness itself was not synonymous with an absence of intervention. Participants could desire substantial cosmetic change while simultaneously wanting treatment to remain visually undetectable. P03, who had undergone bonding, stated, “I never wanted anyone to know that I had done something.” Similarly, P08 described wanting a smile that appeared balanced but not designed. These accounts indicated that the aesthetic target was not simply maximal whiteness or symmetry, but an optimized appearance that retained the impression of being naturally occurring.

Whiteness emerged as a particularly accessible marker of improvement, cleanliness, and conformity. However, treatment did not necessarily stabilize the comparison standard. P01 acknowledged awareness that lighting altered how teeth appeared online but stated, “I still compare.” P07 similarly described satisfaction with whitening being disrupted when paper-white teeth repeatedly reappeared in the feed. Thus, participants' standards could remain mobile even after they had achieved an aesthetic change, with new visual references providing renewed opportunities for comparison.

Participants also sometimes interpreted visual similarity between themselves and people appearing in short videos as evidence of procedural suitability. P06 stated, “Her teeth appeared similar to mine, and veneers were the answer that came to mind.” In these accounts, resemblance of visible dental features could obscure differences in clinical indication, enamel condition, occlusion, periodontal status, or treatment alternatives that were not apparent in the video. Participants also described transformation videos as compressing the perceived treatment journey by moving rapidly from a pre-treatment image to an aesthetic result. P11 explained, “The video begins with the old smile and then all of the run, I did not even think of examining the bite, or whether the gums were good or not.” The omission of diagnostic and procedural stages therefore contributed to a simplified representation of treatment burden in some participants' accounts.

From Inspiration to Self-Surveillance

Participants did not describe short-video dental content as uniformly harmful. For several participants, exposure provided treatment vocabulary, normalized discussion of cosmetic concerns, reduced embarrassment, and made aesthetic dental care appear accessible to ordinary people rather than celebrities alone. P07 explained, “Before Tik Tok, whitening was something only celebrities had access to. So it made me book when I saw normal people whitening.” In this respect, digital content could increase perceived agency by making treatments understandable and socially approachable.

However, greater awareness could coexist with intensified monitoring of appearance. Participants described checking tooth colour in different lighting conditions, enlarging photographs, comparing current and older images, altering smiles in photographs, and repeatedly assessing aspects of their teeth or gingivae. P01 described photographing tooth colour with a front-facing camera in different rooms and acknowledged, “I knew that I was getting ridiculous, but I still checked.” Such accounts suggested that attempts to obtain reassurance could become repetitive because dental appearance varied across lighting conditions, cameras, angles, and digital displays.

Comparison appeared particularly influential when online creators were perceived as socially similar rather than exceptional. P12 reported being less influenced by celebrities than by university students of a similar age, explaining, “They were of my age and they looked the same as they used to look before, so this made me believe that I had no reason.” Relatability therefore appeared to make transformation outcomes feel personally attainable and could connect dental appearance with anticipated confidence, photographs, employment, or broader social acceptance.

The relationship between exposure and self-surveillance was nevertheless not unidirectional. Interpersonal relationships and countervailing content could interrupt or modify comparison. A partner's questioning prompted P04 to seek another professional opinion rather than acting immediately, while

preservation-oriented content provided an alternative aesthetic frame for P06, who stated, "A preservation-oriented video was the first video that made me feel proud of having my own teeth." Participants nevertheless suggested that such protective content was more often deliberately sought, whereas transformation-oriented content could appear repeatedly without active searching. These divergent experiences reinforced the interpretation that algorithmic exposure interacted with individual interests, relationships, and active information-seeking rather than determining decisions independently.

Screenshot-Led Consultation

Saved photographs and videos formed an important bridge between online aesthetic content and clinical encounters. Nine participants had shown or intended to show screenshots during dental consultations. Visual references reduced the difficulty of verbally describing subtle preferences regarding tooth shape, colour, proportion, or the degree of desired change. P03 explained, "Saying anything about the shape, I could say this is what I mean." Screenshots therefore functioned as practical communication tools that allowed participants to externalize preferences that might otherwise have been difficult to articulate.

The response of the clinician influenced whether these digital references enhanced or weakened trust. Participants valued clinicians who examined specific features of the reference image, identified what might or might not be achievable, and related these differences to the participant's anatomy, bite, facial structure, or other clinical considerations. P02 particularly valued an orthodontist who demonstrated the participant-specific problem rather than dismissing the source material with a generalized message that "TikTok was bad." Individualized interpretation appeared to transform disagreement from simple rejection into an explanation grounded in the participant's clinical circumstances.

At the same time, screenshots could function as more than conversational aids. Some participants entered consultations with expectations not necessarily of obtaining identical teeth but of obtaining a comparable magnitude of transformation. P11 described expecting "the same degree of change," illustrating how an image could become an informal benchmark even when exact replication was not anticipated. When clinicians declined or modified a requested procedure, some participants interpreted disagreement as conservatism, insufficient skill, or unwillingness to provide the desired treatment rather than as a clinically protective judgment.

Second opinions therefore had an ambivalent role. They could provide legitimate reassessment after an unsatisfactory consultation, but they could also become a process of searching until a preferred recommendation was obtained. P06 stated, "I persisted until one of them said that veneers could be used." The clinically relevant distinction was therefore not simply whether another opinion was sought, but whether successive consultations broadened understanding of risks and alternatives or progressively removed barriers to an already preferred intervention.

Consent Under Aesthetic Momentum

The final theme described how treatment decisions could become progressively invested with emotional, social, and practical meaning before formal consent occurred. By the time some participants reached a consultation, they had already saved images, compared providers, discussed prices, considered specific procedures, and imagined their future appearance. P11 described this pre-consultation investment clearly: "Before being issued the form, I had already visualised the photos after. Therefore, I was already thinking about the outcome rather than each risk." These accounts informed the interpretation of aesthetic momentum, referring to the accumulating investment in an anticipated aesthetic outcome that could make proceeding with treatment feel increasingly natural or expected.

Participants' recollection and prioritization of treatment risks were uneven. Short-term sensitivity and discomfort appeared more readily recognized, whereas issues such as irreversible tooth preparation, replacement, staining, maintenance, retreatment, uncertainty, and long-term biological consequences were less prominent in some accounts. The option of receiving no cosmetic treatment could also be interpreted as passivity rather than as a legitimate preservation strategy. P05 explained that being told the teeth could simply be left unchanged initially felt like an absence of an option rather than an active clinical choice.

Commercial cues could further narrow the perceived opportunity for reflection. Expiring discounts, promotional pricing, and creator codes introduced time pressure into decisions that participants had often already invested in emotionally. Although these influences were not described as eliminating personal choice, they could make postponement feel associated with losing an opportunity or incurring additional cost. The relevance of such pressure was therefore situated within an already developing trajectory of expectation rather than interpreted as coercion in isolation.

Conversely, participants described greater trust when clinicians deliberately expanded the space for reflection. Helpful practices included providing written treatment plans, explaining procedures in stages, using realistic rather than idealized images, clarifying biological limitations, discussing conservative alternatives, and explicitly stating that an immediate decision was unnecessary. The message "You do not have to decide today" was experienced as particularly supportive because it separated information-giving from immediate treatment commitment. Participants who shifted from pursuing an idealized transformation toward narrower and more attainable objectives, such as reducing a visible irregularity rather than achieving a "perfect" smile, appeared better able to consider uncertainty and trade-offs.

Table 2. Representative Verbatim Quotations Mapped to Themes and Subthemes

Theme	Subtheme	Participant	Verbatim Quotation
The Algorithmic Ideal Smile	Normalization through repetition	P05	"After some time, it was no longer a special celebrity smile. It was the regular teeth, and mine were the peculiar ones."
	Naturalness despite intervention	P03	"I never wanted anyone to know that I had done something."
	Persistent comparison	P01	"I still compare."
	Visual similarity and procedural expectation	P06	"Her teeth appeared similar to mine, and veneers were the answer that came to mind."
	Compressed treatment journey	P11	"The video begins with the old smile and then all of the run, I did not even think of examining the bite, or whether the gums were good or not."
From Inspiration to Self-Surveillance	Accessibility and normalization of treatment	P07	"Before Tik Tok, whitening was something only celebrities had access to. So it made me book when I saw normal people whitening."
	Repetitive appearance checking	P01	"I knew that I was getting ridiculous, but I still checked."
	Influence of socially similar peers	P12	"They were of my age and they looked the same as they used to look before, so this made me believe that I had no reason."
	Protective counter-content	P06	"A preservation-oriented video was the first video that made me feel proud of having my own teeth."
Screenshot-Led Consultation	Communicating aesthetic preferences	P03	"Saying anything about the shape, I could say this is what I mean."
	Desired magnitude of change	P11	"The same degree of change."
	Searching for an acceptable recommendation	P06	"I persisted until one of them said that veneers could be used."
Consent Under Aesthetic Momentum	Pre-consultation investment in outcome	P11	"Before being issued the form, I had already visualised the photos after. Therefore, I was already thinking about the outcome rather than each risk."
	Decisional pause	Participant account	"You do not have to decide today."

Taken together, the four themes demonstrate that short-video dental content was experienced neither as a uniformly harmful influence nor as a neutral source of information. Participants described a dynamic process in which repeated visual exposure could normalize particular smile standards, facilitate knowledge and treatment-seeking, intensify appearance comparison, provide useful tools for communicating aesthetic preferences, and contribute to expectations carried into clinical encounters. The findings further suggest that these processes were modified by individual agency, peer and partner responses, preservation-oriented information, and clinician communication. Rather than demonstrating that social media directly caused cosmetic treatment decisions, the accounts indicate that digitally mediated expectations formed part of the broader relational and interpretive context in which participants evaluated aesthetic concerns, treatment possibilities, and consent.

DISCUSSION

This qualitative study explored how young adults interpreted short-video cosmetic dentistry and incorporated digitally encountered aesthetic ideals into self-evaluation, treatment expectations, clinical consultations, and deliberation about cosmetic dental care. Four interrelated themes were developed: the algorithmic ideal smile, the transition from inspiration to self-surveillance, screenshot-led consultation, and consent under aesthetic momentum. Together, the findings suggest that short-video content was experienced neither simply as misinformation nor as a direct determinant of treatment seeking. Rather, participants described a more complex process in which repeated visual exposure interacted with pre-existing aesthetic concerns, comparison with socially relatable others, peer responses, treatment aspirations, clinician communication, and commercial cues. The findings therefore extend previous cross-sectional research associating social media exposure with dental-aesthetic perceptions and interest in cosmetic procedures by illustrating how such exposure may acquire meaning within the decision-making experiences of individual patients (1–3).

The theme of the algorithmic ideal smile illustrates how repeated exposure may contribute to perceptions of what constitutes an ordinary or desirable dental appearance. Existing studies have shown that whiteness, alignment, symmetry, and related morphological characteristics influence judgments of dental attractiveness and satisfaction with appearance (5,6). Participants in the present study described similar characteristics but added an important tension: they wanted visible improvement while simultaneously seeking an appearance that did not seem artificial. This apparent contradiction suggests that "naturalness" within digitally mediated cosmetic culture may not signify absence of intervention; instead, it may represent successful concealment of intervention. Algorithmic recommendation systems may further intensify exposure to visually similar material according to patterns of previous engagement, although such systems should not be interpreted as acting independently of users' own interests and behaviours (4). The present accounts support a reciprocal interpretation in which prior concerns may direct attention toward cosmetic content while repeated exposure can, in turn, provide additional standards against which appearance is evaluated.

The movement from inspiration to self-surveillance similarly demonstrates this dual character of social-media exposure. Participants described gaining treatment vocabulary, encountering relatable people undergoing cosmetic procedures, and feeling less embarrassed about seeking aesthetic care. These experiences demonstrate that short-video platforms can increase perceived accessibility and provide socially meaningful health information rather than functioning solely as sources of appearance pressure. At the same time, several participants described repeated checking of tooth colour, enlargement of photographs, comparison across lighting conditions, monitoring of gingival appearance, or modification of smiling behaviour. Previous research has associated internalization of appearance ideals and social comparison with dissatisfaction, body-image concerns, and appearance anxiety (7–11). The present findings add a specifically dental dimension to this literature by showing how tooth colour, alignment, gingival display, photographs, front-facing cameras, and digital images may become recurrent objects of comparison.

Comparison appeared particularly meaningful when content creators were perceived as socially similar to participants. Transformations involving people of a similar age or social position could appear more personally attainable than celebrity examples. This observation is compatible with social-comparison models in which the perceived relevance and attainability of a comparison target influence its psychological importance (7,8). However, participant accounts also revealed countervailing influences. Preservation-oriented educational content, supportive partners, and professional advice could interrupt or reframe comparison. This finding is important because it challenges a deterministic interpretation of platform exposure. Evidence from broader appearance-focused social-media research likewise suggests that the content and framing of digital material can influence whether exposure reinforces appearance concerns or promotes more compassionate and diverse perspectives (12). Clinical assessment should therefore not assume that cosmetic concerns are necessarily pathological, but it may be useful to explore how frequently patients compare or photograph their teeth, how rigidly they define an acceptable result,

and whether anticipated treatment outcomes are linked to broader expectations concerning confidence, employment, relationships, or social acceptance.

Screenshot-led consultation represented another important interface between digital culture and clinical care. Nine of the 12 participants had shown or intended to show saved images during consultations, indicating that visual references were an established component of communication within this sample. Participants described screenshots as useful when preferences concerning tooth shape, colour, proportion, or degree of change were difficult to explain verbally. From this perspective, digital images can function as patient-generated communication aids rather than simply as sources of unrealistic expectations. Problems arose when visual references became implicit benchmarks for treatment magnitude or when resemblance to an online case was interpreted as evidence that a particular procedure should also be clinically appropriate. Social-media and digital communication in dentistry therefore create both educational opportunities and professional risks when promotional or testimonial content is interpreted without sufficient information regarding case selection, treatment indication, biological limitations, and long-term maintenance (13).

Participants particularly valued clinicians who engaged with visual references rather than dismissing them. Trust appeared stronger when professionals identified the features participants liked, compared the image with the individual's own dental and facial characteristics, explained anatomical or biological differences, and offered alternatives that retained the patient's underlying aesthetic objective. Such encounters suggest that disagreement can be more acceptable when it is individualized and clinically justified. Conversely, unexplained refusal could be interpreted as conservatism or insufficient competence, potentially encouraging repeated consultation until a provider was found who would offer the preferred procedure. This observation has relevance to the broader ethical literature on overtreatment in aesthetic and private dentistry, where commercial competition and patient demand can complicate boundaries between technical feasibility, professional judgment, and appropriate care (21,22). A second opinion is therefore not inherently problematic, but repeated provider seeking may warrant careful attention when it progressively removes protective clinical constraints without improving the patient's understanding of treatment trade-offs.

The most distinctive interpretive contribution of the study is the concept of aesthetic momentum. In this analysis, aesthetic momentum refers to the accumulating emotional, visual, social, and practical investment in an anticipated cosmetic outcome before a definitive treatment decision is made. Participants described saving images, imagining future photographs, comparing clinicians, considering prices, discussing treatment with others, and anticipating the social consequences of an altered smile. By the time formal consent was presented, some participants described themselves as already oriented toward the desired outcome. The concept does not imply that capacity or autonomy was absent. Rather, it identifies a context in which desired benefits may become increasingly salient while irreversibility, uncertainty, maintenance, retreatment, alternatives, or no treatment remain comparatively abstract.

This interpretation is consistent with approaches to informed consent that treat consent as a communicative and relational process rather than a signature or one-time transfer of information (14–16). The findings do not demonstrate that participants' consent was legally or ethically invalid, and such a conclusion would exceed the evidence generated through retrospective interviews. Instead, participants' accounts indicate that deliberation can begin well before formal consent and may already be influenced by repeated images, peer endorsement, promotional urgency, anticipated identity change, and prior financial or emotional investment. Relational autonomy provides a useful interpretive framework because decisions were described as occurring within networks of platform recommendations, peers, partners, clinicians, creators, and commercial messages rather than in isolation. Clinically, this suggests that consent for elective aesthetic treatment may benefit from attention to how expectations were formed as well as to whether conventional risks and alternatives have been disclosed.

Several practical implications follow from these findings, although they should be regarded as implications for practice rather than interventions proven effective by this study. Clinicians may benefit from explicitly

inviting patients to show saved photographs or videos and then identifying the specific feature being sought rather than treating the reference image as a procedural prescription. Edited images, lighting, camera angle, case selection, treatment indications, maintenance requirements, and biological constraints can be discussed in relation to the patient's own clinical circumstances. Conservative and minimally invasive options should be presented as active treatment choices, and preservation or no treatment should be framed positively rather than as therapeutic inactivity. Written plans, staged explanations, realistic images, teach-back techniques, and sufficient time for reflection may be particularly valuable when the requested treatment is irreversible or when expectations are rigid. These approaches are compatible with established ethical emphasis on material risks, meaningful alternatives, patient understanding, and voluntary decision-making in aesthetic care (14–16).

Commercial communication deserves similar attention. Participants described expiring offers, creator codes, and promotional deadlines as influencing the perceived cost of postponement. The study does not establish that such practices constitute coercion, but the combination of promotional urgency with an already anticipated aesthetic result may narrow the psychological space available for reconsideration. Existing concerns regarding social-media marketing and overtreatment in cosmetic dentistry support the need for promotional communication that does not obscure treatment limitations or disproportionately emphasize idealized outcomes (13,21,22). Professional media literacy should therefore extend beyond warning patients about filters. It should include discussion of case selection, missing treatment stages, biological costs, maintenance, retreatment, uncertainty, and the distinction between technical possibility and proportionate treatment.

The study has several strengths. The interpretive design allowed participants to explain how cosmetic dental content acquired meaning in everyday life rather than reducing exposure to a numerical measure. Purposive maximum-variation sampling incorporated different cosmetic interests and stages of decision-making, while attention to negative or disconfirming accounts reduced the risk of constructing an exclusively harm-oriented account of social media. Reflexive thematic analysis also enabled the findings to move beyond surface description toward concepts linking repeated exposure, comparison, clinical interaction, and decision-making (18–20). The use of participant quotations provides a transparent connection between the thematic interpretation and the experiences from which it was developed.

These strengths should be considered alongside important limitations. The study involved 12 purposively selected young adults from a single urban setting in Medan, and the findings are therefore intended for analytical rather than statistical generalization. Participants had existing interest or experience in cosmetic dental treatment, which may have made aesthetic content more salient than it would be among young adults without such interests. Recruitment and self-selection may also have favoured individuals willing to discuss social media and dental appearance. The analysis was based on retrospective self-report and did not independently audit participants' algorithmic feeds, verify the content they recalled, observe consultations, or assess actual treatment outcomes. Social-desirability and recall effects are consequently possible, particularly where participants were asked to evaluate appearance concerns and previous clinical decisions. The study also combined participants considering different procedures with differing degrees of invasiveness and reversibility, limiting procedure-specific conclusions. Where interviews or quotations involved translation, linguistic nuance may also have been affected; the methodological implications of translation should therefore be made explicit if translation occurred. Researcher positionality and the interviewer-participant relationship may likewise have shaped both disclosure and interpretation and should be reported transparently in accordance with qualitative reporting standards. Finally, the cross-sectional interview design cannot establish temporal or causal effects; longitudinal research combining qualitative interviews with direct assessment of platform exposure and subsequent clinical decision-making would provide a stronger basis for understanding how aesthetic expectations evolve over time.

Future research should examine whether the processes identified here vary according to socioeconomic position, dental literacy, gender, type and invasiveness of cosmetic procedure, prior treatment history, intensity of social-media engagement, and cultural context. Longitudinal qualitative work could explore

whether comparison standards stabilize after treatment or remain responsive to changing digital content. Studies incorporating patient–clinician consultation observations could also examine how screenshots, risk communication, disagreement, and conservative alternatives are negotiated in practice. Rather than testing whether social media is uniformly beneficial or harmful, such research should investigate the conditions under which digitally mediated information expands informed agency and those under which it narrows the range of options that patients perceive as acceptable.

CONCLUSION

Young adults in this qualitative study described short-video dental content as an important part of the context in which cosmetic dental expectations, appearance comparisons, clinical conversations, and treatment decisions were formed. Repeated exposure could make particular combinations of whiteness, alignment, symmetry, and apparent naturalness seem increasingly normative, while relatable transformation content could both reduce embarrassment about seeking care and encourage repeated self-monitoring. Screenshots provided a useful means of communicating aesthetic preferences but could also become implicit benchmarks when visual similarity was interpreted as procedural suitability. The concept of aesthetic momentum captures how accumulated visual, emotional, social, and practical investment in an anticipated result may make immediate benefits more salient than uncertainty, maintenance, irreversibility, alternatives, or no treatment. These findings do not establish that short-video exposure causes cosmetic treatment uptake or invalidates consent; rather, they indicate that informed decision-making may be strengthened when clinicians explore how expectations were formed, critically interpret visual references with patients, explain biological limitations, present preservation and minimally invasive alternatives positively, and provide meaningful time for reconsideration. Ethical cosmetic dental care therefore requires engagement with digitally mediated expectations while preserving patient agency, proportionality of treatment, and genuinely informed choice.

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